

PATENT

Atty. Dkt. No. ATT-027PUS (ATT/2000-0575)

REMARKS

In view of the above amendment and the following discussion, the Applicants submit that none of the claims now pending in the application are made obvious under the provisions of 35 U.S.C. § 103. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS 2, 3, 8 AND 9 UNDER 35 U.S.C. § 103

The Examiner has rejected claims 2, 3, 8 and 9 in the Office Action under 35 U.S.C. § 103 as being unpatentable over by Tsushima, et al. (U.S. Patent 5,600,466, issued on February 4, 1997, hereinafter referred to as "Tsushima") in view of Augustsson (U.S. Patent 6,473,540, issued on October 29, 2002, hereinafter referred to as "Augustsson"). Applicants respectfully traverse the rejection.

Tsushima teaches a wavelength division optical signaling network apparatus and method. Tsushima teaches using a plurality of lasers to generate continuous wave light at varying frequencies. (See Tsushima, col. 5, ll. 1-6.) The varying frequencies of light are aligned using a dispersion compensator. (See Tsushima, col. 5, ll. 45-67.) Then the aligned light frequencies are modulated and tapped before being combined by a combiner. (See Tsushima, col. 6, ll. 32-45.)

Augustsson teaches a device and method for filtering optical wavelengths. Augustsson teaches using a circulator, demultiplexer, a plurality of waveguides, a plurality of attenuators and a plurality of reflection sections to form a optical filtering device. (See Augustsson, Abstract.)

The Applicants respectfully submit that Tsushima and Augustsson, alone or in any permissible combination, fail to teach, show or suggest an optical packet-switched ring network comprising a circulator coupled to a tunable laser and a demultiplexer coupled to the circulator followed by delay lines and a reflector. Specifically, Applicants' independent claims 2, 3, 8 and 9 positively recite:

2. An optical packet-switched ring network, comprising:
a node including
an optical switch coupled to a fiber of the ring network;
a transmit switch coupled to the optical switch;

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a wavelength stacking assembly coupled to the transmit switch, wherein the wavelength stacking assembly includes a tunable laser, a circulator coupled to the tunable laser, a demultiplexer coupled to the circulator followed by delay lines and a reflector;

a receive switch coupled to the optical switch; and

a wavelength unstacking assembly coupled to the receive switch.
(Emphasis Added)

3. An optical packet-switched ring network, comprising:
a node including

an optical switch coupled to a fiber of the ring network;

a transmit switch coupled to the optical switch;

a wavelength stacking assembly coupled to the transmit switch;

a receive switch coupled to the optical switch; and

a wavelength unstacking assembly coupled to the receive switch, wherein the wavelength unstacking assembly includes a circulator, a demultiplexer coupled to the circulator followed by delay lines and a reflector. (Emphasis Added.)

8. A method for transmitting and receiving stacked packets on a ring network comprising:

stacking packets of varying wavelengths to form a composite transmit data packet;

buffering the transmit data packet in a transmit switch;

transmitting the transmit data packet onto the ring network via an optical switch;

receiving a receive data packet via the optical switch;

buffering the receive data packet in a receive switch;

unstacking the receive data packet; and

stacking the transmit data packet using a tunable laser, a circulator coupled to the tunable laser, a demultiplexer coupled to the circulator followed by delay lines and a reflector. (Emphasis Added.)

9. A method for transmitting and receiving stacked packets on a ring network comprising:

stacking packets of varying wavelengths to form a composite transmit data packet;

buffering the transmit data packet in a transmit switch;

transmitting the transmit data packet onto the ring network via an optical switch;

receiving a receive data packet via the optical switch;

buffering the receive data packet in a receive switch;

unstacking the receive data packet; and

unstacking the receive data packet using a circulator, a demultiplexer coupled to the circulator followed by delay lines and a reflector. (Emphasis Added.)

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Applicants' invention teaches an optical packet-switched ring network comprising a circulator coupled to a tunable laser and a demultiplexer coupled to the circulator followed by delay lines and a reflector. The Applicants' invention teaches that varying light frequencies are aligned and stacked by using a single circulator, followed by a demultiplexer, multiple delay lines and a reflector. (See Applicants' Specification, Page 4, Lines 14-24; Figure 2.)

In contrast, the alleged combination (as taught by Tsushima) simply fails to teach an optical packet-switched ring network having a circulator coupled to a tunable laser and a demultiplexer coupled to the circulator followed by delay lines and a reflector. In fact, the Examiner conceded that "Tsushima does not disclose a circulator and reflectors coupled with a demultiplexer". However, the Examiner then alleged that Augustsson teaches such a configuration. Applicants respectfully disagree.

Augustsson fails to bridge the significant gap left by Tsushima. Augustsson only teaches using a circulator, demultiplexer, a plurality of waveguides, a plurality of attenuators and a plurality of reflection sections to form an optical filtering device. (See Augustsson, Abstract; FIG. 1.) Augustsson does not teach, show or suggest using delay lines that would allow the device to align and stack varying light frequencies as taught by the Applicants' invention. Therefore, the combination of Tsushima and Augustsson (even if arguably it is deemed to be combinable and Applicants maintain that it should not be combined) still does not teach or suggest Applicants' invention as recited in independent claims 2, 3, 8 and 9. As such, the Applicants respectfully request the rejection be withdrawn.

Conclusion

Thus, the Applicants submit that all of these claims now fully satisfy the requirements of 35 U.S.C. §103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so

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that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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